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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/700,523 | 11/15/2000 | David A. Kapilow | 1999-0096-3 | 6109 |

7590 08/25/2005
AT&T Corporation
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Middletown, NJ 07748

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| EXAMINER |
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HARPER, V PAUL

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| ART UNIT | PAPER NUMBER |
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2654

DATE MAILED: 08/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------------|--|--|
| Office Action Summary | Application No. 09/700,523 | Applicant(s) KAPILOW, DAVID A. | |
| | Examiner V. Paul Harper | Art Unit 2654 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 June 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 2 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In this case, the phrase “which portion corresponds” (line 9 of claim 2) is unclear. Previous to this, two terms relating to ‘portions’ have been introduced “a portion of the speech signal corresponding to the unavailable packet” and “a portion of the previously formed speech signal.” Furthermore, is a specific size of the portion being referred to?

The following art rejection is given in view of the above 112 2nd rejection giving the claim a reasonable interpretation in view of the art.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Bialik (U.S. Patent 6,389,006), hereinafter referred to as Bialik.

Regarding **claim 1**, Bialik teaches methods for encoding and decoding speech for lossy transmission networks. Bialik's methods include the following steps:

- concealing the effect of missing speech information on generated speech, said speech information having been compressed and transmitted in packets to a receiver which does not receive one or more of such packets, the method comprising the steps of (col. 1, lines 36-41, handing lost packets when transmitting compressed voice signals):

- forming a speech signal based on received packets representing speech information (col. 1, lines 36-41, decoding voice signals);

- in response to a determination that a packet is not available at the receiver to form the speech signal, synthesizing a portion of the speech signal corresponding to the unavailable packet using a portion of the previously formed speech signal (col. 1, lines 41-45, utilizing already stored information to interpolate what the lost packet might sound like),

- wherein the number of pitch periods of the previously formed portion used in such synthesis is greater for speech of a fundamental frequency above a threshold than for speech of a fundamental frequency below the threshold (col. 2, line 61 through col. 3, line 23, last 120 samples of the last good frame [the previously formed portion] are

Art Unit: 2654

used to interpolate the lost packet, where it is inherently true that for a fixed interval **any** fundamental frequency chosen as a threshold has a greater number of pitch periods for a fundamental frequency above the threshold than for a fundamental frequency below the threshold).

Regarding **claim 2**, in view of the 112 2nd rejection (see §1) this claim is rejected for the same reasons given above in the rejection of claim 1.

Response to Arguments

Applicant's arguments filed 6/27/2005 have been fully considered but they are not persuasive.

3. Applicant asserts on page 3:

The col. 2, line 61 through col. 3, line 213 passage teaches a use of a voiced/unvoiced classifier with which the state of the last good frame is checked. What the classifier does is employ a correlation calculation and an energy calculation of the last 120 samples of the last good frame to determine whether the missing frame is voiced or unvoiced, and also to fine tune the pitch period (the information about which was send by the encoder). *The 120 samples are NOT used in the generation of the synthesized speech.* A study of the 0.723 standard, which purportedly the cited passage summarizes, reveals that only one pitch period is used in the synthesis (repeated whatever number of times it is needed). (Italics added)

Bialik teaches that the current frame is regenerated with the periodic excitation having a period equal to the value provided by the classifier (col. 3, lines 17-19) where the value provided by the classifier results from calculations performed on the last 120 samples. Thus, the 120 samples are used in the generation of the synthesized speech.

4. Applicant further asserts on page 3:

In contradistinction, claim 1 specifies "using a portion of the previously formed speech signal to synthesize "a portion of the speech signal corresponding to the unavailable packet." What is that used portion? *The claim specifies that the used portion "is greater for speech of a fundamental frequency above a threshold than for speech of a fundamental frequency below the threshold."* It is respectfully submitted, therefore, that claim 1 is not anticipated by G.732 and certainly not by the Bialik reference. (Italics added)

The claim states "*the number of pitch periods of the previously formed portion* used in such synthesis is greater for" And as taught by Bialik, "the current frame is regenerated with periodic excitation having a period equal to the value provided by the classifier" (col. 3, lines 16-20). So the previous portion (the 120 samples) is used to determine a pitch period, and the current frame is regenerated using a number of those pitch periods (i.e. a "number of pitch periods of the previously formed portion is used ..."). Furthermore, as stated in the rejection of claim 1, the limitation "the number of pitch periods .. is greater for speech of a fundamental frequency above a threshold than for speech of a fundamental frequency below the threshold" is inherently true (i.e., the higher the pitch frequency the greater the number of pitch periods for any fixed interval, 120 samples).

5. Applicant further asserts on page 3:

New claim 2 is submitted that is similar to claim 1, except that it more particularly specifies that the "used portion" is a portion of the developed speech signal that is repeated in order to realize the synthesized speech corresponding to the missing packet, and that repeated portion corresponds to a number of pitch periods and a threshold.

Note the 112 2nd rejection above, also see §4, where it is argued that the pitch period of the previous portion (used portion?) is repeated to generate a signal to replace the missing portion.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

Art Unit: 2654

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

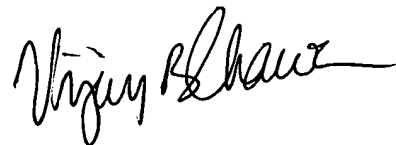
Any inquiry concerning this communication or earlier communications from the examiner should be directed to V. Paul Harper whose telephone number is (571) 272-7605. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil can be reached on (571) 272-7602. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

8/17/2005

V. Paul Harper
Patent Examiner
Art Unit 2654



**VIJAY CHAWAN
PRIMARY EXAMINER**